

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/GB 98/00554

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 5 E21B17/10 E21B17/22

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ✓	GB 2 288 198 A (HYDRILL COMPANY) 11 October 1995 see page 2, line 27 - line 33 see page 3, line 15 - page 4, line 2 see page 5, line 31 - page 6, line 9 see page 6, line 15 - line 16 see figures 1.3.5 ---	1-16
X	US 5 247 990 A (SUDOL) 28 September 1993  see column 3, line 41 - line 44 see column 2, line 61 - column 3, line 15 see figures 2-15 ---	1,2,5, 8-11, 13-16 -/---



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## Special categories of cited documents

- "A" document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search

12 June 1998

Date of mailing of the international search report

19/06/1998

## Name and mailing address of the ISA

European Patent Office, P.O. Box 500 Patentzaal 2  
 NL - 2280 HV Rijswijk  
 Tel. (-31-70) 340-2040, Tx. 31 551 400 41  
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## Authorized officer

Sogno, M

## INTERNATIONAL SEARCH REPORT

Joint Application No

PCT/G8 98/00554

## C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 938 299 A (JELLSMA) 3 July 1990  see column 4, line 22 - line 31 see column 6, line 25 - line 27; figures 1,2 ---	1,2, 6-11, 13-16
X	US 3 320 004 A (GARRETT) 16 May 1967  see column 2, line 35 - line 44 see column 2, line 50 - line 53 ---	1,2, 5-11,13, 14,16
X	US 4 796 670 A (RUSSEL) 10 January 1989  see column 3, line 46 - line 63 see column 4, line 28 - line 44 see column 5, line 60 - column 6, line 2 ---	1-10,12, 13,16
X	US 2 166 116 A (BETTIS) 18 July 1939  see page 1, left-hand column, line 51 - line 53 see page 1, right-hand column, line 21 - line 23 ---	1,2,5, 8-11,13, 14,16
A ✓	G8 2 226 520 A (BAKER HUGUES INCORPORATED) 4 July 1990 see the whole document ---	1,2
A ✓	G8 2 285 649 A (DOWNHOLE PRODUCTS (UK) LIMITED) 19 July 1995 see the whole document ---	1,8-16

## INTERNATIONAL SEARCH REPORT

Information on parent/family members

Int'l. Serial Application No.  
PCT/G8 98/00554

Patent document cited in search report		Publication date	Parent/family member(s)		Publication date
✓ GB 2288198	A	11-10-1995	US	5542454 A	06-08-1996
			DE	19513232 A	12-10-1995
			FR	2718487 A	13-10-1995
✓ US 5247990	A	28-09-1993	CA	2091547 A	13-09-1993
✓ US 4938299	A	03-07-1990	EP	0410729 A	30-01-1991
✓ US 3320004	A	16-05-1967	NONE		
✓ US 4796670	A	10-01-1989	AU	2374888 A	20-04-1989
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✓ US 2166116	A	18-07-1939	NONE		
✓ GB 2226520	A	04-07-1990	NL	8903052 A	02-07-1990
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			CA	2144504 A	13-09-1995
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